PUBLIC HEALTH REPORTS

VOL. 49 MAY 18, 1934 NO. 20

SILICOSIS *

By R. R. SAYERS, *Surgeon, United States Public Health Service, Medical Officer in Charge, Office of Industrial Hygiene and Sanitation*

While clean air is obviously preferable to dirty or dusty air, the harmfulness of the dust varies with a number of factors, as the composition of the dust, size of the particles, and concentration in the air. Some dusts, as coal dust, flour, and aluminum dust, are inflammable and when in proper concentration in the air if ignited may explode. Other dusts, as arsenic, lead, and some dyes, are classed as toxic. Still others, as silica and asbestos, are not inflammable and are not usually considered as toxic, yet breathing them results in pathological changes with the accompanying impairment to the health of the individual. The disease of the lungs caused by these dusts is known under the general name of "pneumoconiosis", and "silicosis" when produced by silica dust. Silicosis is also known as "miners' phthisis" and "miners' consumption."

The Committee on Pneumoconiosis of the Industrial Hygiene Section of the American Public Health Association recently defined silicosis as—

> a disease due to breathing air containing silica (SiO_2), characterized anatomically by generalized fibrotic changes and the development of miliary nodulation in both lungs, and clinically by shortness of breath, decreased chest expansion, lessened capacity for work, absence of fever, increased susceptibility to tuberculosis (some or all of which symptoms may be present), and by characteristic X-ray findings.

This definition purposely excluded diseases produced by other dust such as asbestos, talc, and coal dust. Although the definition is limiting, it is believed to be inclusive enough to cover the disease that has been recognized for a great many years as being the primary cause of extensive morbidity and mortality among workers in certain trades and districts of the world.

Collis [1] gives a very complete report on the literature from the time of Hippocrates up to the present. Hippocrates spoke of the metal digger as a man who breathed with difficulty and had other

* Presented before the New York Academy of Medicine, Dec. 8, 1932.

[1] Collis, Edgar L.: Industrial pneumonoconioses, with special reference to dust phthisis. Milroy Lectures. 1915. 42 pp.

symptoms similar to those found in silicosis. Agricola, in 1557, stated:

> Some mines are very dry, and the constant dust enters the blood and lungs, producing the difficulty of breathing the Greeks call asthma. When the dust is corrosive, it ulcerates the lungs and produces consumption, hence it is that in the Carpathian Mountains there are women who have married seven husbands, all of whom this dreadful disease has brought to an early grave.

Löhneiss, in 1690, referring to miners, describes the effects on them as follows:

> The dust and stone fall upon the lungs, the men have lung disease, breathe with difficulty, and at last take consumption.

In 1713 a British patent was granted for grinding flint by wet methods. Previously the flints were pounded dry, which—

> Proved very destructive to mankind, so much that any person, ever so healthful and strong, working in that business cannot possibly survive over 2 years, occasioned by the dust sucked into his body by the air he breathes.

In 1862 Dr. Peacock gave a report based on an examination of over 600 miners, in which he established the existence of miners' disease, distinguishing it from true phthisis, stating that—

> The quickness of pulse, the rapid and extreme emaciation, and the night perspiration so characteristic of true phthisis are generally absent or only slightly marked.

In 1902 a committee, of which Dr. J. S. Haldane was a member, reinvestigated the causation of the high phthisis mortality among Cornish tin miners, and decided that—

> So far as the Cornish miners are concerned it seems evident enough that stone dust, which they inhale, produces permanent injury to the lung, gradually in the case of ordinary miners, and rapidly in the case of machine-drill men. * * * That the primary injury to the lung is due solely to the inhalation of dust would seem to be practically certain.

In 1905 the Western Australian Commission on Ventilation and Sanitation of Mines [2] made reference to miners' phthisis and in 1907 a report on miners' phthisis at Bendigo was issued by Dr. W. Summons. In 1910 [2] Dr. J. H. L. Cumpston reported on his study among miners in Western Australia. In 1909 pneumoconiosis was scheduled as an accident under the workmen's compensation act in New Zealand, but was repealed by the end of that year. In 1910 a national conference held in Chicago called attention to an interstitial pneumonia which prevailed in some of the lead and zinc mines of Missouri and in deep mines of Utah and Nevada. Although the disease was known before 1899 in the Transvaal, it was not until 1902 that a commission was appointed there to inquire into the extent that the disease prevailed. In 1911 a sanatorium was opened for the accommodation of patients, and in that same year a Miners' Phthisis Com-

[2] The Truth About Miners' Phthisis. The South African Journal, vol. 25, Oct. 16, 1915, p. 153.

mission was appointed, which issued a report dealing rather fully with miners' phthisis among white miners.

Silicosis is present in many of the mining districts of the United States. In 1914 Dr. A. J. Lanza [3] found that 433 miners of 720 examined in the Joplin (Mo.) district had silicosis. He also found in 1916 that 432 of 1,018 examined in Butte, Mont., were so affected.[4]

In 1922 Jarvis and Hoffman [5] found the mortality from this disease to be very high among granite workers in Vermont. In 1929 Dr. A. E. Russell [6] and others, of the United States Public Health Service, completed a study in this same district, in which they found the universal occurrence of silicosis among the workers but an absence of deaths from silicosis *per se*, tuberculosis apparently always intervening.

An investigation was made in 1926 by Hayhurst [7] and his coworkers in one of the largest and deepest sandstone districts in the world, located in Ohio and worked for more than 50 years. The workmen were employed by two quarry companies which marketed grindstones, scythestones, curbing, flagging, breakwater and building stone, and also furnace sand. The investigators state that of 260 of the men having silicosis only 13, or 6 percent, had tuberculosis, as compared with the 20 to 30 percent reported as usually found present by silicosis studies throughout the world. No explanation has been found yet for this anomaly.

In 1923 the mining companies of the tri-State district of Kansas, Missouri, and Oklahoma, in the interest of the health and safety of their employees, requested the Bureau of Mines to determine whether measures in use for the prevention of silicosis were adequate and, if not, to recommend improvements. This investigation included the examination of 309 miners, of whom 101 were found to be negative, 114 doubtful, and 94 positive for silicosis.

In 1924 a small clinic with a physician and a clerk on duty was organized at Picher, Okla., to conduct examinations of miners. In 1926 more men were applying for examination than the small force at the clinic could handle. In 1927 the Metropolitan Life Insurance Co. and the mine operators through their association entered into an agreement with the United States Department of Commerce, through the Bureau of Mines, to supply additional funds for expanding the

[3] Lanza, A. J.: Miners' consumption—A study of 433 cases of the disease among zinc miners in southwestern Missouri, with a chapter on roentgen-ray findings in miners' consumption, by Dr. S. B. Childs. Public Health Bull. 85, U.S. Public Health Service. 1917. 40 pp.

[4] Harrington, D., and Lanza, A. J.: Miners' consumption in the mines of Butte, Mont. Tech. Paper 260, Bureau of Mines. 1921. 19 pp.

[5] Hoffman, Frederick: Bureau of Labor Statistics Bull. 293. 1922. 178 pp.

[6] Russell, A. E., Britten, R. H., Thompson, L. R., and Bloomfield, J. J.: Health of workers in dusty trades. II. Exposure to siliceous dust (granite industry). Public Health Bulletin No. 187, U.S. Public Health Service. 1929. 206 pp.

[7] Hayhurst, E. R., Kindel, D. J., Nelswander, B. E., and Barrett, C. D.: Silicosis with low incidence of tuberculosis. Jour. Ind. Hyg., vol. 11, no. 7, September 1929, pp. 228–244.

work of the clinic in the Picher field. The investigation was completed on June 30, 1932, and the clinic turned over to the association for continuance. During the period covered by the Bureau's investigation, 27,553 miners and a number of women and children were examined. Five manuscripts, one for each year that the Picher clinic has been in operation, have been completed, and two summarizing the first 2 years' work published. Of 7,722 miners and men seeking mine employment who were examined the first year of clinic operation, 5,704 were classified as negative, 1,362 as having first-stage silicosis, 253 as having second stage, 32 as having third stage, 267 were diagnosed as having silicosis complicated with tuberculosis, and 104 as having tuberculosis without silicosis.

In 1929 a committee was appointed by the Industrial Commissioner of New York to draft for recommendation to the Industrial Board rules relating to the regulation of rock drilling, sand blasting, and rock crushing. The same year an examination was made in New York City of 208 men exposed to rock dust in subway or tunnel construction.[8] Silicosis was found to be present in 118, or 57 percent, of the men examined.

Silicosis probably occurs in the mining and allied industries throughout the world. Eight countries were represented at the international conference held in Johannesburg in 1930. A recent bibliography on pneumoconiosis[9] lists references to the literature of 26 countries. The disease occurs in the pottery, foundry, sand-blasting, abrasive, granite, tool and ax grinding, glass, slate, silica grinding, and mining industries.

Since the literature of practically all the principal nations of the world contains articles on this subject, it is apparent that no nationality is exempt, and that all races are susceptible is shown by the wide distribution of silicosis. Although the incidence is higher among the younger miners in districts where the percentage of free silica is high, and among older miners where the percentage of silica is low, age in itself probably is no great factor.

Previous occupation of the men may have a definite influence in predisposing to silicosis, if they have been exposed to dust or to other respiratory irritants. According to some investigators, animal experiments indicate that coal dust has this effect. Three groups of animals were exposed for a definite time as follows: Group 1 to free silica dust, group 2 to a mixture of coal dust and silica dust, and group 3 first to coal dust and then to silica dust. They were examined several months after exposure, and groups 1 and 2 had more silica remaining

[8] Smith, Adelaide R.: Silicosis among rock drillers and excavators in New York City. Jour. Ind. Hyg., vol. 11, no. 3, March 1929, pp. 92-96.

[9] International Labour Office, Pneumoconiosis: A list of references. Studies and Reports, Series F (Industrial Hygiene), no. 15, 1932, 76 pp.

in the lungs than group 3, although silica dust could be demonstrated in all groups.[10]

Men who have or have had respiratory diseases, especially tuberculosis, are apparently more readily affected by silica dust.

Silicosis has been divided arbitrarily into various stages. In South Africa the stages are defined by law as anteprimary, primary, and secondary. This same classification is followed also in Ontario. In the United States the stages are called first, second, and third. The Committee on Pneumoconiosis, referred to above, describes the stages as follows:

First stage (corresponds to anteprimary stage of South Africa).—The symptoms of uncomplicated first-stage silicosis are few and often indefinite. The man may apparently be quite well and his working capacity not noticeably impaired. Slight shortness of breath on exertion and some unproductive cough, often with recurrent colds, are the most usual symptoms. The man may have a little less ability to expand his chest than formerly and the elasticity of the chest may be slightly impaired. The earliest specific indication of the presence of silicosis is the radiographic appearance, consisting of generalized arborization throughout both lung fields with more or less small, discrete mottling.

This characteristic mottling is due to shadows cast by the discrete individual nodules of fibrous tissue in the lungs and is essential to the diagnosis of silicosis. Without this finding the diagnosis of silicosis is not sustained except by autopsy.

Second stage (corresponds to primary stage of South Africa).—A definite shortness of breath on exertion is usually found, and pains in the chest are a frequent complaint. A dry morning cough is often present, sometimes with vomiting, and recurrent colds are more frequent. Even then the man's appearance may be healthy, but he is dyspnoeic on exertion, he cannot work as well as formerly, his chest expansion is noticeably decreased, the movement being sluggish and diminished in elasticity.

The characteristic radiographic appearance is a generalized, medium-sized mottling throughout both lung fields. The shadows of the individual nodules are for the most part discrete and well defined on a background of fibrous arborization, but there may be here and there larger but limited opacities due to irregular pleural thickening or to a localized aggregation of nodules.

Third stage (corresponds to the secondary stage of South Africa).—In the third stage the shortness of breath is marked and distressing even on slight exertion. The cough is more frequent; the expectoration is in most cases slight, but may be copious. The individual's

[10] Mavrogordato, A.: Studies in experimental silicosis and other pneumonokonioses. Publication of the South African Institution for Medical Research. Johannesburg, Mar. 31, 1922. 164 pp.

capacity for work becomes seriously and permanently impaired; his expansion is greatly decreased even with forced inspiration; he may lose flesh; his pulse rate may be increased, and his heart may become dilated.

The radiographic appearances in the third stage are further accentuated, the mottling is more intense, the nodules are larger and take on a conglomerate form so that large shadows are shown corresponding to areas of dense fibrosis.

Physical examination of an individual may reveal changes in percussion and auscultation, mild in the first stage and increasing with the progress of the disease. These alone are not sufficient to be of great value in diagnosis of silicosis.

The pathology of silicosis is well summarized in the statement on The Medical Aspects of Silicosis made at the International Conference on Silicosis held in Johannesburg August 13 to 27, 1930.[11] It was agreed that the microscopic pathological changes that may be produced by the prolonged inhalation of silica dust are as follows:

(*a*) The development of a condition designated in South Africa as a dry bronchiolitis, characterized by an accumulation of dust-filled phagocytes in or in relation to the terminal bronchioles, with possibly some desquamation of their epithelium.

(*b*) The accumulation of dust-containing phagocytes about and in the intrapulmonary lymphoid tissue, and their transportation through the lymphatics into the tracheobronchial lymph nodes. (The conditions described above under (*a*) and (*b*) do not constitute the disease silicosis.)

(*c*) The gradual development of fibrous tissue within such accumulations of phagocytes and the formation of characteristic nodules of hyaline fibrous tissue.

(*d*) Degenerative changes in these foci.

(*e*) The hyaline nodules increase in size by extension at their periphery. Coalescence of adjacent nodules takes place and brings about involvement of further areas of the lung. (The conditions described under (*c*), (*d*), and (*e*) constitute the disease silicosis.)

Dr. Watkins-Pitchford [12] calls to attention that due to the effect of the silica that remains in the lungs the disease may progress for some time after the individual is no longer exposed to breathing the siliceous dust. However, a man suffering from simple silicosis generally improves when removed from the dusty atmosphere and placed in suitable surroundings.

If breathing a dust causes a disease, evidently the disease would not result if the dust were not in the air breathed. In order to control the dustiness of the air, the amount of dust present must be determined. Two factors are usually considered, namely, the weight and the number of particles of dust in a given quantity of air. Many instruments have been devised for making these determinations, but any

[11] Silicosis: Records of the International Conference held at Johannesburg, Aug. 13-27, 1930. Studies and reports of International Labour Office, Series F (Industrial Hygiene) no. 13, Geneva, 1930, p. 87.

[12] Watkins-Pitchford, W.: Address before meeting of Pan Pacific Science Congress, Melbourne, Australia, Aug. 13, 1923; abstract in Med. Jour. Australia, vol. 2, Sept. 29, 1923, pp. 325-327.

apparatus to be of value must be able to remove a large percentage of the dust from the sample of air and retain it in a form that may be examined. The sugar-tube method and the konimeter were used in South Africa and later in other parts of the world, including the United States. More recently the impinger, developed by Leonard Greenburg, of the United States Public Health Service, and G. W. Smith, of the United States Bureau of Mines, has been the method of choice in the United States. Among some of the other instruments are the Read water-spray dust collector, the Kotze hydrokonimeter of South Africa, the Owen dust counter, and the electric dust collector of Philip Drinker.

The instruments mentioned will give information as to the condition of the air but will not aid in any way in protecting the men breathing it. The men will be protected (1) if no dust is formed, (2) if, when formed, the dust is prevented from getting into the air, (3) if once in the air the dust is removed from the air, and (4) if the dusty air is replaced by clean air.

In the mining industry, wet methods have been used to prevent the dust from getting into the air to be breathed, as wet drilling, wetting the working face and the rock or ore before shoveling. This method has materially reduced the number of cases of silicosis produced.

In the tool- and ax-grinding industry, wet methods were found to be less efficacious than dry exhaust. Recently exhaust systems have been developed for use in drilling for foundations in New York City which promise to be useful in more extended fields. Where wet methods are used, they have not been found sufficient to keep the air entirely free from dust.

General ventilation is as important, if not more important, a preventive measure. If the dusty air can be replaced by clean air, or the dusty air sufficiently diluted by clean air, the opportunity for the development of silicosis can be greatly reduced.

The Bureau of Mines has advised that for exposure to silica (quartz) dust the count should not exceed 10,000,000 particles per cubic foot when collected by the Greenburg impinger method and counted with about 110 diameters magnification, light field illumination. This is practically equivalent to 300 particles per cubic centimeter. The United States Public Health Service finds [13] that a safe limit lies somewhere between 9,000,000 and 20,000,000 particles per cubic foot of air. The dust referred to is granite dust with about 25 to 35 percent of free silica and 60 to 70 percent of total silica. Oklahoma has included a limit of 300 particles per cubic centimeter in its law, and 10,000,000 particles per cubic foot has been included in the regulations of the Department of Labor of New York State. A

[13] See footnote 6.

similar standard is being used in Wisconsin and in Ontario, and is in agreement with the standard fixed some years ago in South Africa.

Respiratory diseases probably predispose to silicosis. Individuals with tuberculosis are a menace to others working in silica dust, as the silicotic individual is very much more susceptible to tuberculosis than is the normal man. Physical examination before employment and of all workers at regular intervals has been required by law in Australia, South Africa, Great Britain, and Ontario, Canada. Any man suffering with silicosis should not be employed where he will have to breathe dust, especially silica dust. If he has tuberculosis, he should not be permitted to work where he will be in contact with those exposed to silica dust.

In some countries the physical examinations are made by a national medical bureau constituted for the purpose. In other countries the men best qualified in various districts are appointed by the Government to make the examinations. In still others, a board consists of a medical man appointed by the State, one selected by the industry, and a third by the employees. The men selected to make these physical examinations should be experienced in respiratory diseases, especially those caused by dust, should be acquainted with the industry and the conditions under which the men must work, and should be neutral, that is, should favor neither the employer nor the employee. However experienced and fair-minded they may be, occasionally either the employer or the worker wants an appeal, which can usually be made only to the board itself. The examination of the man in question is made by another member of the board without the examiner being acquainted with the fact that an appeal has been made. The findings of the two physicians are then reviewed by conference of the entire board.

Physical examination is believed to be very important for prevention of silicosis, as well as tuberculosis; but it must be remembered that no one measure is successful. A combination of all preventive measures—methods of control of dust at its source, good ventilation for dilution, and initial and periodical physical examination—are needed to prevent silicosis.

CLONORCHIASIS IN HAWAII

Report of Cases in Natives of Hawaii

By CHAPMAN H. BINFORD, *Passed Assistant Surgeon, United States Public Health Service, Leprosy Investigation Station, Honolulu, Hawaii*

During the past year the ova of *Clonorchis* were found in the stools of four native-born Hawaiians who have resided continuously in the Territory of Hawaii. These findings were obtained in the course of

single routine examinations of the stools of 123 leprous patients who have been recently admitted to segregation.

The following is the report of cases in which the ova of *Clonorchis sinensis* were found:

S. P., male, age 39, Hawaiian, born on the Island of Maui and has lived on Maui with the exceptions of periods 1914–18 and 1929–33, during which he lived on the Island of Molokai. Positive findings were obtained in four stool specimens collected at intervals of several days.

G. K., male, age 48, Hawaiian, born on the Island of Maui and has resided there continuously except for short visits to other islands. Positive findings were obtained in 3 stool specimens collected at intervals of from 7 to 10 days.

A. P., female, age 14, Korean, born on the Island of Maui and has always lived there. Two stool examinations made on specimens collected at intervals of 1 day were positive for the ova.

C. K., female, age 16, part Hawaiian, born on the Island of Oahu and has lived there with the exception of a short visit to the Island of Maui at some date during the past 3 years. The ova were found in 2 stool specimens examined at 2-day intervals.

In the above case reports it is not to be implied that some stool specimens may have been negative for the ova. In each case all stool specimens examined have been positive.

It is of interest to note that each of the above four patients had lived on the Island of Maui for various periods.

The significance of these findings is apparent when it is realized that previous to the year 1927 aliens who were affected with *Clonorchis* were mandatorily excluded under Federal immigration regulations, which classified the condition as a loathsome and contagious disease. In 1927 the regulations were modified, because the investigations and surveys made by the United States Public Health Service indicated that the disease had not spread to man within the boundaries of the United States and the Territory of Hawaii. It was felt that an undue hardship was being worked on arriving aliens infested with *Clonorchis sinensis*.

The infestation of man and mammals is usually brought about by the consumption of raw fish, or fish that is dried, salted, refrigerated, or inadequately cooked. This may have taken place in the above-mentioned cases, either through the importations of infested fish or through the infestation of native fish.

Large quantities of fish are imported to Hawaii from China and Japan, according to statistics obtained from the local office of the United States Customs. During 1932 there were imported from Japan 49,647 pounds of frozen fresh fish and 1,730,120 pounds of fish preserved by drying, pickling, or salting. Of a similarly preserved group, 114,878 pounds were imported from China. There were also imported from Japan 1,280 pounds of frozen fish, classified as "Fresh water fish and eels." Information regarding the localities in which the imported fish were caught or their species was not available.

Under natural conditions the parasite goes through a cycle of development which involves both a snail host and a fish host, together with intermediary phases in which it is a free swimming parasite. The studies of Faust, Walker, and Barlow [1] indicate that the snail hosts of Japan, China, and Southeastern Asia are various species of the family Amnicolidae and the subfamily Bithyniinae. These are operculated snails. Some evidence has been reported to indicate that one species of the Melaniidae, namely, the *M. hongkongiensis* Brot, may also be a host. Montague Cooke, malacologist of the Bishop Museum, Honolulu, states that the operculated snails which have been found in Hawaii are 1 imported species of Viviparidae and 3 native species of Melaniidae.

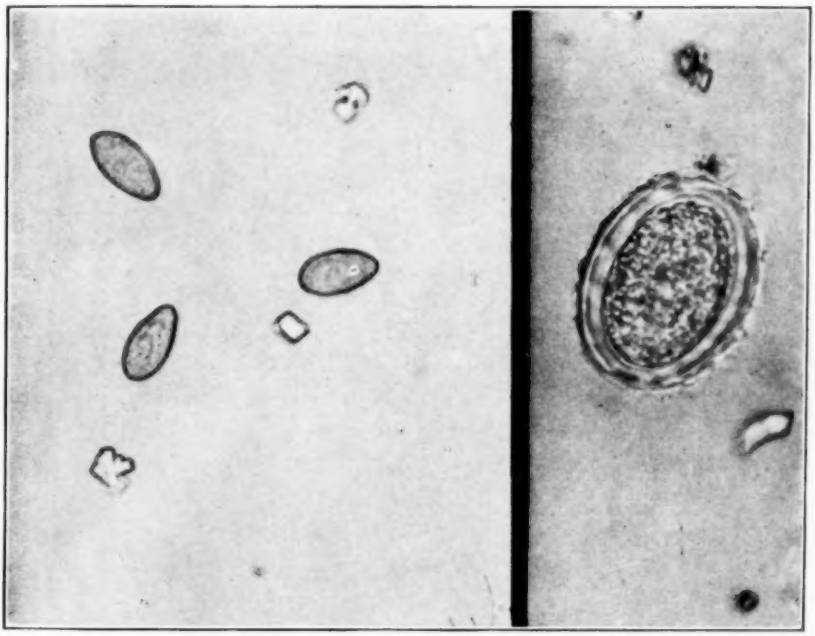
The investigations of the above-mentioned authors have shown that the principal species of Oriental fish in which the *Clonorchis sinensis* encysts are those belonging to the groups Cyprinidae (carp), Gobiidae (goby), and Anabantidae (paradise fish). Live specimens of the Cyprinidae and Anabantidae have been imported to Hawaii for ornamental purposes, and several species of the Gobiidae are native in the Territory. The topography of the islands is such that there are no large natural streams or bodies of fresh water favorable to the growth of fish. However, a few are caught in the small mountain streams and in the artificial ponds where taro is grown for the production of poi, the principle article in the native Hawaiian diet. Two of the patients, S. P. and G. K., give a history of having eaten raw "gold" fish (probably Cyprinidae) which were caught in taro ponds.

These observations have been made under the direction of and in consultation with Surg. N. E. Wayson, United States Public Health Service, who has previously studied the subject. The findings have been further confirmed by the division of zoology at the National Institute of Health, Washington, D.C.

COURT DECISION ON PUBLIC HEALTH

Liability of city for nuisance created in disposing of garbage and refuse.—(Texas Court of Civil Appeals; *City of Longview* v. *Stewart*, 66 S.W. (2d) 450; decided Dec. 8, 1933.) An action was brought against the city of Longview to recover damages for injury to real property alleged to have been sustained because of the maintenance by the city of a dumping ground for garbage, refuse, and the like. A jury found that the dumping ground constituted a nuisance to plaintiff's property, which nuisance had depreciated the rental value of the property in a certain amount. The trial court entered judgment in favor of the plaintiff.

[1] Faust, E. C., et al.: Am. J. Hyg., Monographic Series, No. 8 (March 1927).



Ova of *Clonorchis sinensis* from stool of S.P., showing comparison in size with ovum of *Ascaris lumbricoides*. Approximately × 550.

On appeal, one of the contentions made by the city was that a municipality, operating and maintaining a dumping ground for the benefit of its citizens without profit or gain being derived therefrom, did so in its governmental capacity and, therefore, was not liable for the negligence of its employees. The holding of the court of civil appeals, however, was adverse to this contention, the court saying that it appeared to be well settled in Texas that a city, in disposing of its garbage and refuse, acts in its corporate and not in its governmental capacity and that, if a nuisance is created and maintained thereby, it is liable to injured adjacent property owners without respect to whether in so doing it was negligent or not.

DEATHS DURING WEEK ENDED APR. 28, 1934

[From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce]

	Week ended Apr. 28, 1934	Corresponding week, 1933
Data from 86 large cities of the United States:		
Total deaths	8,613	8,093
Deaths per 1,000 population, annual basis	12.0	11.3
Deaths under 1 year of age	643	654
Deaths under 1 year of age per 1,000 estimated live births	60	[1] 56
Deaths per 1,000 population, annual basis, first 17 weeks of year	12.6	12.0
Data from industrial insurance companies:		
Policies in force	67,729,876	68,497,693
Number of death claims	13,953	13,191
Death claims per 1,000 policies in force, annual rate	10.7	10.0
Death claims per 1,000 policies, first 17 weeks of year, annual rate	11.1	10.9

[1] Data for 81 cities.

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers

Reports for Weeks Ended May 5, 1934, and May 6, 1933

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended May 5, 1934, and May 6, 1933

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended May 5, 1934	Week ended May 6, 1933	Week ended May 5, 1934	Week ended May 6, 1933	Week ended May 5, 1934	Week ended May 6, 1933	Week ended May 5, 1934	Week ended May 6, 1933
New England States:								
Maine	1	2	----	28	31	6	0	1
New Hampshire	----	----	----	----	157	6	0	0
Vermont	----	----	----	----	62	32	0	0
Massachusetts	12	15	----	2	1,425	460	1	3
Rhode Island	----	----	----	----	17	2	0	1
Connecticut	3	1	1	4	126	274	0	0
Middle Atlantic States:								
New York	48	63	[1] 12	[1] 26	1,220	2,829	5	2
New Jersey	15	21	18	4	781	952	2	0
Pennsylvania	58	48	----	----	3,306	1,403	5	2
East North Central States:								
Ohio	26	30	6	9	1,559	652	7	0
Indiana	13	13	14	33	1,367	316	1	0
Illinois	31	26	51	23	2,418	842	13	10
Michigan	15	12	3	2	281	915	0	6
Wisconsin	2	5	33	43	2,030	416	1	0
West North Central States:								
Minnesota	8	2	2	1	302	903	1	1
Iowa [2]	6	11	2	----	186	63	0	1
Missouri [2]	35	20	49	1	608	184	0	3
North Dakota	5	----	2	----	165	88	0	3
South Dakota	3	2	----	----	425	37	0	0
Nebraska	11	2	----	----	369	117	2	0
Kansas	11	7	2	4	635	407	4	0
South Atlantic States:								
Delaware	4	1	----	----	108	4	0	0
Maryland [2]	2	7	4	7	2,597	32	0	1
District of Columbia	3	4	2	----	97	16	0	0
Virginia	7	9	----	----	1,139	214	6	3
West Virginia	20	5	----	7	97	84	0	1
North Carolina	12	19	25	13	2,174	696	2	0
South Carolina	8	14	324	247	443	499	0	0
Georgia [2]	6	5	----	----	252	106	0	0
Florida [2]	4	3	----	2	911	94	1	0
East South Central States:								
Kentucky	11	5	8	22	509	114	2	0
Tennessee	9	11	47	50	526	110	3	2
Alabama [2]	5	6	66	34	703	114	3	0
Mississippi [2]	8	6	----	----	----	----	1	0

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended May 5, 1934, and May 6, 1933—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended May 5, 1934	Week ended May 6, 1933	Week ended May 5, 1934	Week ended May 6, 1933	Week ended May 5, 1934	Week ended May 6, 1933	Week ended May 5, 1934	Week ended May 6 1933
West South Central States:								
Arkansas	9	8	9	11	38	200	2	0
Louisiana	22	8	5	7	196	33	0	1
Oklahoma [4]	3	4	42	25	310	166	6	4
Texas [3]	52	40	228	91	852	1,388	3	2
Mountain States:								
Montana [4]	5		40	8	108	38	0	1
Idaho [4]	1			3	33	31	0	0
Wyoming [4]					130	8	0	1
Colorado	9	1		27	691	3	0	0
New Mexico	4	6	1	20	180	8	0	0
Arizona		2	4		76	92	0	0
Utah	1				166	6	0	0
Pacific States:								
Washington	2	4		38	240	96	0	1
Oregon [4]	3	2	19	24	79	75	0	1
California [4]	44	26	49	20	930	1,329	1	1
Total	557	485	1,068	836	31,055	16,460	72	52

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended May 5, 1934	Week ended May 6, 1933	Week ended May 5, 1934	Week ended May 6, 1933	Week ended May 5, 1934	Week ended May 6, 1933	Week ended May 5, 1934	Week ended May 6, 1933
New England States:								
Maine	0	0	11	17	0	0	0	2
New Hampshire	0	0	8	17	0	0	0	1
Vermont	0	0	2	10	0	0	17	0
Massachusetts	1	1	217	377	0	0	1	0
Rhode Island	0	0	20	33	0	0	1	0
Connecticut	0	0	60	106	0	0	1	3
Middle Atlantic States:								
New York	4	2	768	758	0	2	7	12
New Jersey	0	0	177	276	0	0	3	4
Pennsylvania	0	5	642	875	0	0	9	7
East North Central States:								
Ohio	0	2	820	557	1	0	6	7
Indiana	0	3	159	136	5	1	7	5
Illinois	1	0	575	369	4	7	4	11
Michigan	1	3	672	420	1	0	8	4
Wisconsin	0	0	187	145	28	0	3	1
West North Central States:								
Minnesota	0	0	57	101	12	0	0	1
Iowa [3]	0	0	75	28	11	19	0	0
Missouri [3]	0	0	87	84	4	0	8	1
North Dakota	0	0	21	18	0	0	0	1
South Dakota	1	0	13	18	3	0	1	0
Nebraska	0	0	35	14	9	1	0	0
Kansas	0	1	43	25	5	1	3	2
South Atlantic States:								
Delaware	0	0	4	14	0	0	1	0
Maryland [3]	1	0	52	123	0	0	9	1
District of Columbia	0	0	10	14	0	0	0	0
Virginia	0	2	34	34	0	0	7	10
West Virginia	0	0	77	21	1	2	5	6
North Carolina	1	1	19	56	3	7	2	4
South Carolina	0	0	5	3	0	0	3	8
Georgia [3]	1	0	2	4	0	0	4	9
Florida [3]	0	0	3	3	0	0	3	1
East South Central States:								
Kentucky	0	0	57	68	0	0	8	8
Tennessee	0	1	29	40	0	2	7	4
Alabama [3]	0	0	8	10	0	0	8	1
Mississippi [3]	1	0	7	9	0	2	1	8

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended May 5, 1934, and May 6, 1933—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended May 5, 1934	Week ended May 6, 1933	Week ended May 5, 1934	Week ended May 6, 1933	Week ended May 5, 1934	Week ended May 6, 1933	Week ended May 5, 1934	Week ended May 6, 1933
West South Central States:								
Arkansas	1	0	7	3	1	6	7	2
Louisiana	0	0	11	10	0	0	18	8
Oklahoma [4]	0	0	15	7	3	1	3	1
Texas [3]	2	2	62	57	27	17	18	12
Mountain States:								
Montana [5]	0	0	10	10	2	2	1	1
Idaho [5]	3	0	3	6	0	6	2	0
Wyoming [5]	0	0	11	9	1	0	0	3
Colorado	0	0	27	33	5	3	0	0
New Mexico	0	0	12	10	0	1	4	2
Arizona	2	0	10	7	0	1	0	0
Utah	0	0	10	6	0	0	1	0
Pacific States:								
Washington	0	1	49	55	8	5	5	0
Oregon [5]	1	1	42	24	2	10	2	1
California [4]	13	1-	201	141	11	32	5	6
Total	34	26	5,426	5,161	147	128	201	156

[1] New York City only.
[2] Week ended earlier than Saturday.
[3] Typhus fever, week ended May 5, 1934, 10 cases, as follows: Georgia, 4; Florida, 2; Alabama, 2; Texas, 2.
[4] Exclusive of Oklahoma City and Tulsa.
[5] Rocky Mountain spotted fever, week ended May 5, 1934, 31 cases, as follows: Montana, 6; Idaho, 1; Wyoming, 15; Oregon, 6; California, 3.

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of cases reported monthly by States is published weekly and covers only those States from which reports are received during the current week.

State	Meningococcus meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
April 1934										
Arkansas	7	24	56	88	579	33	0	21	7	3
Connecticut	5	10	9	----	206	----	0	295	0	4
District of Columbia	2	43	4	----	1,123	1	1	49	0	3
Maine	1	5	4	----	83	----	0	62	0	37
Nebraska	4	12	13	----	1,151	----	2	159	37	0
Vermont	----	1	----	----	379	----	0	37	0	[1] 37

[1] Water-borne epidemic caused by broken sewer.

April 1934

	Cases
Actinomycosis:	
Connecticut	1
Chicken pox:	
Arkansas	62
Connecticut	383
District of Columbia	106
Maine	173
Nebraska	296
Vermont	153
Dysentery:	
Arkansas	3
Connecticut (bacillary)	1
German measles:	
Connecticut	7
Maine	90
Lethargic encephalitis:	
Connecticut	2
District of Columbia	1

April 1934—Contd.

	Cases
Mumps:	
Arkansas	52
Connecticut	532
Maine	22
Nebraska	74
Vermont	56
Ophthalmia neonatorum:	
Connecticut	1
Rabies in animals:	
Connecticut	4
Maine	1
Septic sore throat:	
Connecticut	4
Tetanus:	
Connecticut	1
Trachoma:	
Arkansas	2

April 1934—Contd.

	Cases
Tularaemia:	
Arkansas	2
Undulant fever:	
Connecticut	5
Vincent's infection:	
Maine	2
Whooping cough:	
Arkansas	50
Connecticut	290
District of Columbia	129
Maine	341
Nebraska	222
Vermont	144

PLAGUE-INFECTED GROUND SQUIRRELS IN KERN AND TULARE COUNTIES, CALIF.

The director of public health of the State of California has reported that from April 20 to April 30, 1934, 8 lots of ground squirrels, including 16 animals, from Kern and Tulare Counties in the interior of California, were found to be plague infected.

WEEKLY REPORTS FROM CITIES

City reports for week ended Apr. 28, 1934

[This table summarizes the reports received regularly from a selected list of 121 cities for the purpose of showing a cross section of the current urban incidence of the communicable diseases listed in the table. Weekly reports are received from about 700 cities, from which the data are tabulated and filed for reference]

State and City	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Maine:											
Portland	0		0	1	5	0	0	0	0	3	33
New Hampshire:											
Concord	0		0	5	0	3	0	0	0	0	14
Nashua	0			9		0	0		0	6	
Vermont:											
Barre	0		0	0	1	0	0	0	0	0	1
Burlington	0		0	0	0	1	0	0	0	4	8
Massachusetts:											
Boston	1		0	308	35	57	0	9	0	63	250
Fall River	1		0	0	0	3	0	8	1	10	40
Springfield	0		0	8	0	5	0	0	0	21	36
Worcester	1		0	3	9	6	0	2	0	12	69
Rhode Island:											
Pawtucket	0		0	2	0	1	0	0	0	1	18
Providence	0		0	4	6	19	0	1	0	12	67
Connecticut:											
Bridgeport	1		0	1	1	7	0	3	0	0	31
Hartford	1		2	0	4	22	0	0	1	1	31
New Haven	0	1	1	1	4	3	0	1	0	5	42
New York:											
Buffalo	8		0	92	33	10	0	7	0	13	141
New York	39	10	7	221	180	365	0	110	8	104	1,625
Rochester	4		0	1	5	49	0	1	0	5	82
Syracuse	0		0	35	5	3	0	1	0	64	49
New Jersey:											
Camden	0	1	1	48	1	8	0	0	0	2	31
Newark	0	4	0	18	3	34	0	4	0	40	77
Trenton	0	3	0	61	6	15	0	3	0	2	33
Pennsylvania:											
Philadelphia	11	2	0	471	63	123	0	36	1	71	560
Pittsburgh	12	7	3	239	28	37	0	10	0	22	164
Reading	2		0	4	0	10	0	2	0	6	14
Scranton	0			3		5	0		0	5	
Ohio:											
Cincinnati	4		1	11	16	40	0	10	0	11	158
Cleveland	4	30	1	114	27	116	0	20	0	111	236
Columbus	2	2	2	1	5	55	0	2	0	20	67
Toledo	0		0	57	10	28	0	5	0	131	73
Indiana:											
Fort Wayne	7		1	36	0	18	0	0	0	0	34
Indianapolis	0		0	225	15	19	0	3	0	58	
South Bend	0		0	4	0	6	0	1	0	0	20
Terre Haute	0		0	0	4	0	0	2	0	0	28
Illinois:											
Chicago	3	1	8	511	78	275	0	50	0	137	756
Cicero											10
Springfield	2		0	52	5	1	0	0	0	14	27
Michigan:											
Detroit	4	3	3	96	23	154	0	19	0	152	263
Flint	0		0	25	8	122	0	1	0	17	31
Grand Rapids	0		0	4	0	30	0	1	0	4	31
Wisconsin:											
Kenosha	0			0		7	0		0	10	10
Milwaukee	2		0	31	7	90	0	3	0	69	93
Racine	0		0	3	1	4	0	0	0	4	8
Superior	0		0	1	2	0	0	1	0	0	11

City reports for week ended Apr. 28, 1934—Continued

State and City	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Minnesota:											
Duluth	0		0	0	2	2	0	1	1	0	16
Minneapolis	3		0	12	7	16	0	5	0	23	102
St. Paul	2	1	1	1	7	6	0	7	0	47	65
Iowa:											
Des Moines	0			4		8	0		0	0	28
Sioux City	1			10		2	0		0	1	
Waterloo	0					1	0		0	4	
Missouri:											
Kansas City	3		0	5	12	12	0	1	0	25	114
St. Joseph	0		0	8	8	1	0	1	0	0	41
St. Louis	19		1	31	16	34	0	10	0	60	304
North Dakota:											
Fargo	0		0	13	0	0	0	0	0	10	4
Grand Forks	0			0		0	0		0	1	
South Dakota:											
Aberdeen	0			125		0	0		0	16	
Sioux Falls	1			2		0	0		0	0	7
Nebraska:											
Omaha	1		0	162	6	16	2	3	0	15	44
Kansas:											
Topeka	0		0	6	7	1	0	0	0	23	35
Wichita	0		0	60	2	3	0	1	0	41	23
Delaware:											
Wilmington	0		0	51	5	2	0	0	0	4	32
Maryland:											
Baltimore	1	1	3	1,673	30	33	0	11	1	159	204
Cumberland	0		0	7	1	1	0	1	0	0	8
Frederick											
District of Columbia:											
Washington	9		1	171	16	11	0	12	0	29	178
Virginia:											
Lynchburg	1		0	18	2	0	0	1	1	9	14
Norfolk	0		0	48	6	1	0	3	0	1	50
Richmond	1		1	222	3	5	0	1	0	0	53
Roanoke	0		1	6	4	0	0	1	0	4	26
West Virginia:											
Charleston	0		0	7	2	1	0	1	0	1	17
Huntington	0			0		9	0		0	0	
Wheeling	1		1	3	1	22	0	1	0	4	17
North Carolina:											
Raleigh											
Wilmington	0		0	2	4	0	0	0	0	1	12
Winston-Salem	1		0	4	1	1	0	1	0	0	16
South Carolina:											
Charleston	0	15	0	29	3	1	0	1	1	0	25
Columbia	0		2	0	4	0	0	0	0	0	29
Greenville	0		0	1	2	0	0	0	0	3	13
Georgia:											
Atlanta	1	2	1	35	4	2	0	6	0	2	74
Brunswick	0		0	9	0	0	0	0	0	0	7
Savannah	1	18	0	53	1	0	0	2	0	7	37
Florida:											
Miami	1		0	255	2	0	0	1	0	8	25
Tampa	2		0	207	0	0	0	1	0	0	28
Kentucky:											
Ashland	1			30		1	0		0	0	
Lexington	0		0	26	2	4	0	2	0	6	18
Louisville	3		0	35	9	25	0	1	1	60	81
Tennessee:											
Memphis	1		1	61	13	3	0	5	0	11	86
Nashville	0		1	5	7	0	0	1	1	8	57
Alabama:											
Birmingham	2	1	0	51	5	1	0	1	2	1	69
Mobile	0	1	1	2	2	1	0	0	0	0	20
Montgomery	0			67		0	0		0	3	
Arkansas:											
Fort Smith	0			0		4	0		0	1	
Little Rock	1		0	8	6	2	0	2	0	1	9
Louisiana:											
New Orleans	14	1	2	43	6	13	4	7	8	3	133
Shreveport	1		0	10	6	0	0	0	0	4	

City reports for week ended Apr. 28, 1934—Continued

State and City	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Texas:											
Dallas	4	1	1	------	7	4	1	1	0	16	57
Forth Worth	1	------	0	3	3	2	0	1	1	11	34
Galveston	0	------	0	0	3	0	0	0	0	0	10
Houston	2	------	2	3	9	4	2	6	0	11	73
San Antonio	3	------	2	0	5	2	0	4	0	2	67
Montana:											
Billings	0	------	0	0	0	0	0	0	0	6	9
Great Falls	0	------	0	14	0	0	0	0	0	0	5
Helena	0	------	0	0	0	2	0	0	0	0	3
Missoula	0	------	0	0	2	1	0	1	0	0	10
Idaho:											
Boise	0	------	0	7	1	0	1	0	0	0	7
Colorado:											
Denver	7	31	2	257	4	12	0	4	0	84	64
Pueblo	0	------	0	26	1	3	0	2	0	23	10
Utah:											
Salt Lake City	0	------	0	51	5	4	0	3	0	84	36
Nevada:											
Reno	0	------	0	2	0	1	0	0	0	0	4
Washington:											
Seattle	1	------	0	6	2	25	5	7	1	62	77
Spokane	0	------	0	8	3	3	0	0	0	25	24
Tacoma	0	------	0	57	1	0	0	1	0	19	35
Oregon:											
Portland	0	------	0	14	1	20	1	2	0	10	74
Salem	0	------	------	1	------	1	0	------	0	1	------
California:											
Los Angeles	21	19	0	72	7	52	0	13	0	60	278
Sacramento	2	------	0	7	1	6	0	1	0	2	24
San Francisco	1	------	1	222	9	14	0	4	0	10	146

State and city	Meningococcus meningitis		Poliomyelitis cases	State and city	Meningococcus meningitis		Poliomyelitis cases
	Cases	Deaths			Cases	Deaths	
Massachusetts:				Minnesota:			
Boston	1	0	0	St. Paul	1	1	0
Springfield	1	0	0	Iowa:			
New York:				Sioux City	1	1	0
New York	1	3	0	Missouri:			
Pennsylvania:				St. Joseph	1	1	0
Philadelphia	1	0	0	St. Louis	2	1	2
Ohio:				Nebraska:			
Cincinnati	4	4	0	Omaha	0	1	0
Indiana:				Colorado:			
Indianapolis	1	0	0	Denver	3	0	0
Illinois:				California:			
Chicago	6	3	0	Los Angeles	0	0	1
				San Francisco	1	1	0

Lethargic encephalitis.—Cases: Flint, 1; St. Joseph, 2; Baltimore, 1.
Pellagra.—Cases: Winston-Salem, 1; Savannah, 1; Birmingham, 1; Montgomery, 2.
Typhus fever.—New York, 1 death; Houston, 1 case.

FOREIGN AND INSULAR

CANADA

Provinces—Communicable diseases—2 weeks ended April 21, 1934.—During the 2 weeks ended April 21, 1934, cases of certain communicable diseases were reported by the Department of Pensions and National Health of Canada, for 8 Provinces, as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	British Columbia	Total
Cerebrospinal meningitis	1	1		1	5			1	9
Chicken pox		9		186	457	38	62	98	850
Diphtheria		4	2	27	20	8	21		82
Dysentery				4	2			1	7
Erysipelas				11	13	3	4	3	34
Influenza		19		8	34			22	83
Lethargic encephalitis			1	2					3
Measles	1	28		321	160	1,251	42	19	1,822
Mumps					552	19	10	114	695
Paratyphoid fever					1	1			2
Pneumonia		17			54		17	13	101
Poliomyelitis		1		1					2
Scarlet fever		21	3	131	346	28	12	198	730
Smallpox								1	1
Trachoma							11		11
Tuberculosis	5	3	12	184	92	22	22	44	384
Typhoid fever				60	15	8	4	1	88
Undulant fever		1			2			1	4
Whooping cough		13	1	243	583	41	14	43	938

NOTE.—No report was received from Alberta for the above period.

Ontario Province—Communicable diseases—5 weeks ended March 31, 1934.—The Department of Health of the Province of Ontario, Canada, reports certain communicable diseases for the 5 weeks ended March 31, 1934, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Cerebrospinal meningitis	6	1	Paratyphoid fever	8	
Chicken pox	1,083	1	Pneumonia		209
Conjunctivitis	1		Puerperal septicemia	2	1
Diphtheria	45	2	Scarlet fever	916	6
Erysipelas	30	2	Septic sore throat	6	
German measles	24		Syphilis	204	2
Gonorrhea	177		Trench mouth	2	
Influenza	54	6	Tuberculosis	229	57
Lethargic encephalitis		1	Typhoid fever	19	1
Malaria	1		Undulant fever	10	
Measles	199		Whooping cough	912	1
Mumps	1,110				

CZECHOSLOVAKIA

Communicable diseases—February 1934.—During the month of February 1934, certain communicable diseases were reported in Czechoslovakia, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax	5		Paratyphoid fever	4	2
Cerebrospinal meningitis	15	6	Poliomyelitis	6	1
Chicken pox	194	1	Puerperal fever	66	22
Diphtheria	1,940	123	Scarlet fever	1,759	29
Dysentery	2		Trachoma	99	
Influenza	176	11	Typhoid fever	354	34
Malaria	3		Typhus fever	17	

PUERTO RICO

Notifiable diseases—4 weeks ended April 21, 1934.—During the 4 weeks ended April 21, 1934, cases of certain notifiable diseases were reported in the municipalities of Puerto Rico, as follows:

Diseases	Cases	Diseases	Cases
Anthrax	1	Pellagra	11
Chicken pox	146	Puerperal septicemia	4
Diphtheria	54	Ringworm	5
Dysentery	34	Syphilis	16
Erysipelas	6	Tetanus	8
Filariasis	3	Tetanus, infantile	3
Influenza	27	Trachoma	58
Malaria	[1] 5,284	Tuberculosis	525
Measles	62	Typhoid fever	30
Mumps	31	Whooping cough	237
Ophthalmia neonatorum	3		

[1] Includes results from a special survey.

SPAIN

Vital statistics—1933.—The following table shows the birth and death rates in Spain during the year 1933.

Birth rate per 1,000 population	27.81
Death rate per 1,000 population	16.44
Deaths under 1 year per 1,000 live births	112
Stillbirths per 1,000 births	32.30
Death rates per 100,000 population for:	
Typhoid fever and paratyphoid fever	13.58
Typhus fever	.04
Smallpox	.01
Measles	12.49
Scarlet fever	1.45
Whooping cough	6.23
Diphtheria	4.92
Influenza	32.70
Plague	.01
Tuberculosis (respiratory system)	93.62
Tuberculosis (other forms)	24.11
Syphilis	2.43
Death rates per 100,000 population for—Contd.	
Malaria	1.17
Cancer and other malignant tumors	68.74
Diabetes mellitus	9.76
Cerebral hemorrhage, embolism, and cerebral thrombosis	133.13
Heart disease	203.30
Bronchitis	78.23
Pneumonia	164.11
Diarrhea and enteritis	184.49
Appendicitis	3.33
Nephritis	54.96
Suicide	3.80
Homicide	1.56
Violent deaths (except suicide and homicide)	30.30
Puerperal septicemia per 1,000 births	2.08

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

(NOTE.—A table giving current information of the world prevalence of quarantinable diseases appeared in the PUBLIC HEALTH REPORTS for Apr. 27, 1934, pp. 541-554. A similar cumulative table will appear in the PUBLIC HEALTH REPORTS to be issued May 25, 1934, and thereafter, at least for the time being, in the issue published on the last Friday of each month.)

Cholera

Philippine Islands.—No cholera was reported in the Philippine Islands during the week ended May 5, 1934.

Plague

United States—California.—For the period April 20–30, 1934, inclusive, 5 lots with a total of 11 plague-infected ground squirrels were reported in Kern County, and 3 lots with a total of 5 plague-infected ground squirrels were reported in Tulare County, Calif.

Yellow Fever

Brazil.—On February 26, 1934, 1 case of yellow fever with 1 death was reported in St. Mathew, Ceara State, Brazil.

For the week ended April 28, 1934, 1 case of yellow fever with 1 death was reported in Mato Grosso State, Brazil, in a place distant from the seashore with no rail connections.